

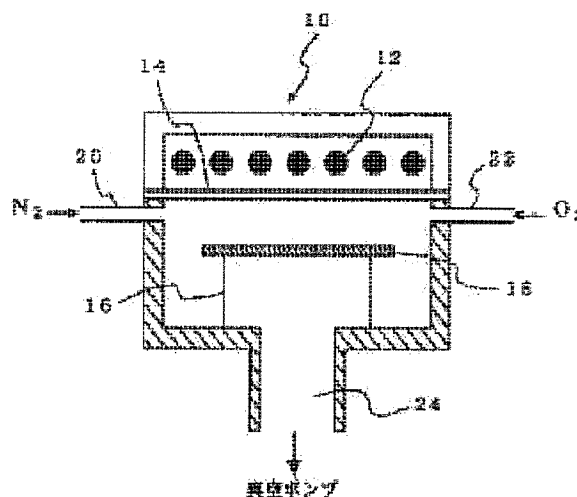


FORMING METHOD OF OXIDE FILM**Publication number:** JP11307526 (A)**Publication date:** 1999-11-05**Inventor(s):** ANDO KOICHI**Applicant(s):** NIPPON ELECTRIC CO**Classification:****- international:** *H01L29/78; C23C8/10; H01L21/28; H01L21/316; H01L29/66; C23C8/10; H01L21/02; (IPC1-7): H01L21/316; H01L29/78***- European:** H01L21/28E2C2V; C23C8/10**Application number:** JP19980115151 19980424**Priority number(s):** JP19980115151 19980424**Also published as:** US6258731 (B1) CN1236980 (A)**Abstract of JP 11307526 (A)**

PROBLEM TO BE SOLVED: To provide a method forming a very thin oxide film by low pressure oxidizing in which film thickness is controlled properly. **SOLUTION:** A method forming an SiO₂ film on an Si substrate by introducing O₂ on the Si substrate contains a process for setting an Si substrate 1 in a heating furnace 10, a process for introducing N₂ in the furnace 10, a process for introducing O₂ in the furnace 10 and maintaining a constant oxidizing pressure, a process for raising the temperature up to a constant oxidizing temperature, while the oxidizing pressure is kept constant, a process for maintaining the above constant oxidizing temperature for a constant oxidizing period, while the oxidizing pressure is kept constant, and a process introducing N₂ in the furnace 10 at the same time, when temperature fall is started after the above constant period has passed, replacing the inside of the furnace by N₂, and maintaining a constant pressure higher than the oxidizing pressure until the temperature on the furnace drops almost to the room temperature.



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